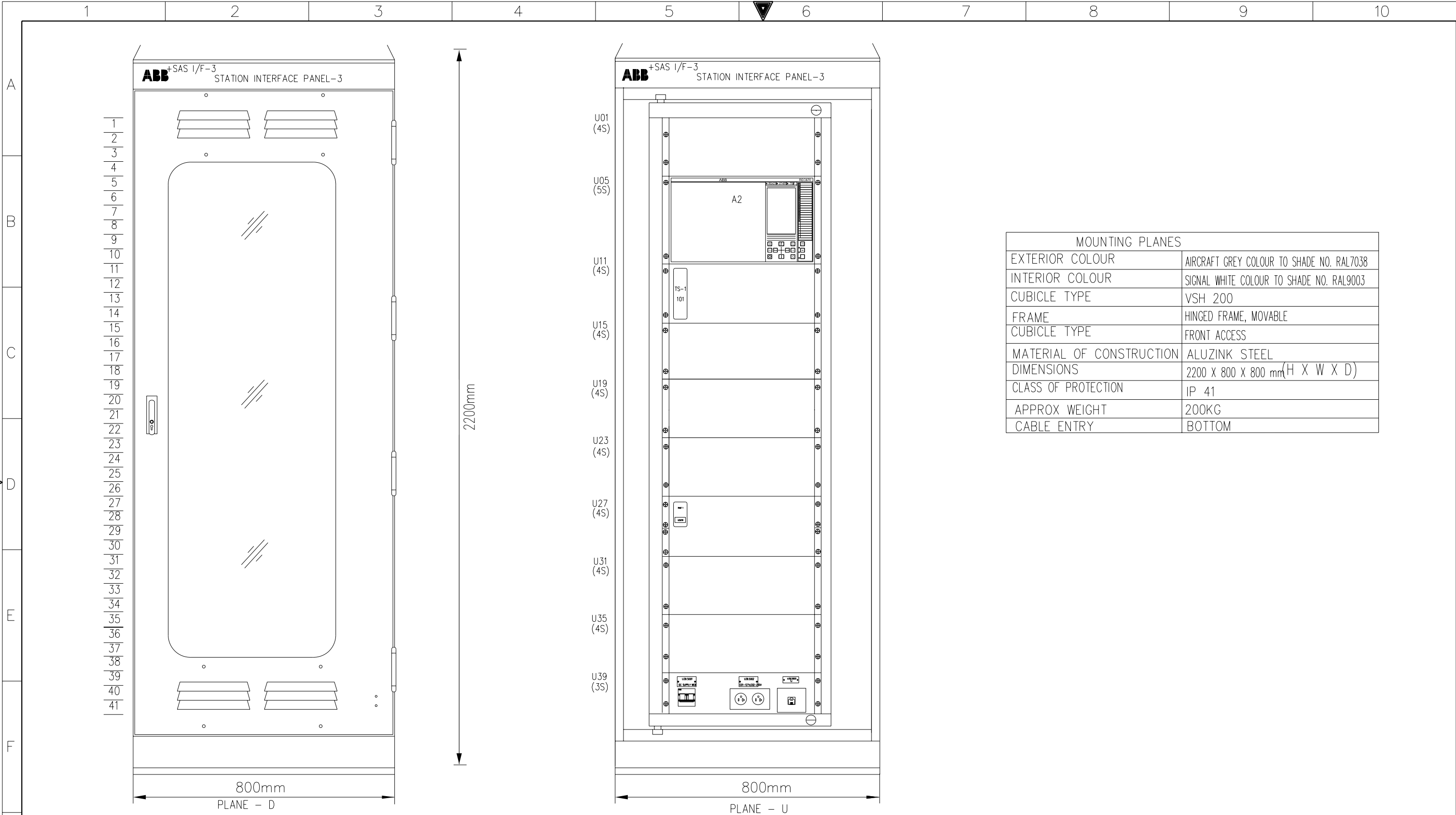
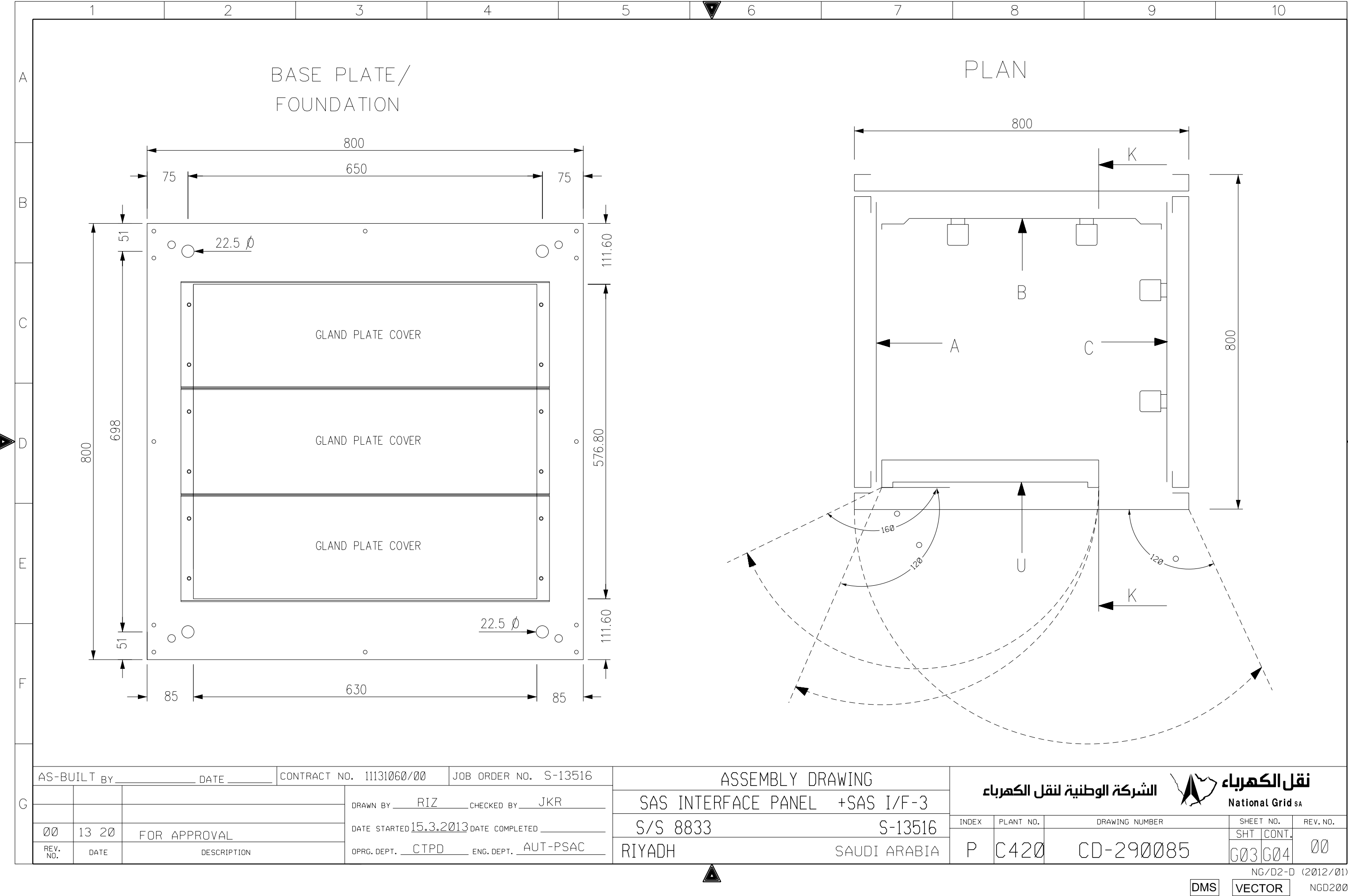


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	REV. NO.	DATE	DESCRIPTION				P	C420	CD-290085	SHT	CONT.	
										G01	G02	00



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C										
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E	CLIENT : SAUDI ELECTRICITY COMPANY CENTRAL OPERATING AREA									
F	PROJECT : Construction Of New 132/13.8kV AT SOUTH WEST UNAIZAH									
	SUBSTATION : S/S 8833									
	CONTRACT NO. : 11131060/00									
	TITLE : LIST OF APPARATUS +SAS I/F-3									
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	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC					

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A	SR. NO.	GA REF.	SCH. REF.	D E S C R I P T I O N		SHEET NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION	COUNTRY OF ORIGIN		
				STATION INTERFACE PANEL-3									
	1	U05.5001	A3	STATION COMMON ALARM SWITCHING EQUIPMENT WITH FOLLOWING SPECIFICATION		291 TO 296	1	REC 670	ABB	1MRK 002814-AC	SWEDEN		
				AUX : EL=90-250V DC									
				FREQ : 50/60HZ									
				BINARY INPUT : 14 NOS(PER CARD 16 INPUTS RL=110-125DC)									
	2	U11.101	TS-1	TEST SWITCH FOR REC 670 (A3)		245	1	RTXP18	ABB	RK 926 115-AN	SWEDEN		
B	3	U27.101	74IF	DUAL TARGET RELAY (REVERSE FLAG) (A1 DC FAIL/SPARE)		245	1	RXSF1	ABB	RK 271 019 AN	SWEDEN		
				CONTACTS :1NO+2NC PER COIL									
				AUX.VOLT :1NO+2NC PER COIL									
				FLAG :SELF RESET									
	4			MCB 2 POLE 6A, FOR DC SUPPLY WITH 2NC AUXILIARY CONTACT		216	1	S 282 UC-K6 S2-H02	ABB	GH S282 0164 R0377 GH S270 1916 R0003	GERMANY		
		U39.5001	Q1	Q1 IF+ SUPPLY									
											FRANCE		
	5	U39.5002	C01	CONVENIENCE OUTLET 10A, 127V AC		211	1	USM45 & USMS45	LEGRAND	74140 & 74180			
			C02	CONVENIENCE OUTLET 10A, 220V AC									
C			C1,C2	MINIATURE CIRCUIT BREAKER, 2 POLE, 10A FOR CONVENIENCE OUTLET WITH AUXILIARY SWITCH, 1NO + 1NC CONTACTS		211	2	S202-C10 S2C-H11L	ABB	2CDS 253 001 R0104 2CDS 200 936 R0001	GERMANY		
	6		C3	THERMOSTAT FOR SPACE HEATER, 5-60 C		211	1	SK 3110	RITTAL	SK 3110	THIWAN		
	7	U39.5003	TJ	TELEPHONE JACK 1GANG 4WIRE		211	1	EDF410	EDISON	EDF410	SWEDEN		
	8		C7	ON/OFF SWITCH FOR SPACE HEATER		211	1	M2SS1-10B MCBH-10	ABB	1SFA 611 200 R1006 1SFA 611 605 R1101			
	9		DS	DOOR SWITCH FOR CONTROL OF CUBICLE INTERNAL ILLUMINATION LAMP		211	1	LS30P	ABB	1SBV 010213 R1202	SWEDEN		
	10			INTERNAL ILLUMINATION CUBICLE LAMP SUITABLE FOR 127V AC, 60Hz SUPPLY, 20W		211	1	T-4	SUNON	SP-20W			
	11		SH	SPACE HEATER, 150W, 120V, 60Hz		211	1	MICA	GRUPPO	1FZEK 006 C001	ITALY		
D													
E													
F													
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131060/00		JOB ORDER NO. S-13516		LIST OF APPARATUS		الشركة الوطنية لنقل الكهرباء نقل الكهرباء National Grid sa				
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LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE
U05.5001	U05.5001 A3	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm
U11.101	U11.101 TS-1	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm
U27.101	U27.101 74IF/SPARE	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm

LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE
C1	C1 127V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C2	C2 220V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C3	C3 THERMOSTAT	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C7	C7 ON/OFF SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
DS	DS DOOR SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
IL	IL ILLUMINATION LAMP	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
SH	SH SPACE HEATER	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm

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	AC SUPPLY FOR ILLUMINATION & POWER SOCKET	211	X																																																																			
AUXLIARY CONTACTS	212	X																																																																				
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DRAWN BY _____ NSK _____ CHECKED BY _____ JKR

DATE STARTED 15.3.2013 DATE COMPLETED _____

OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC

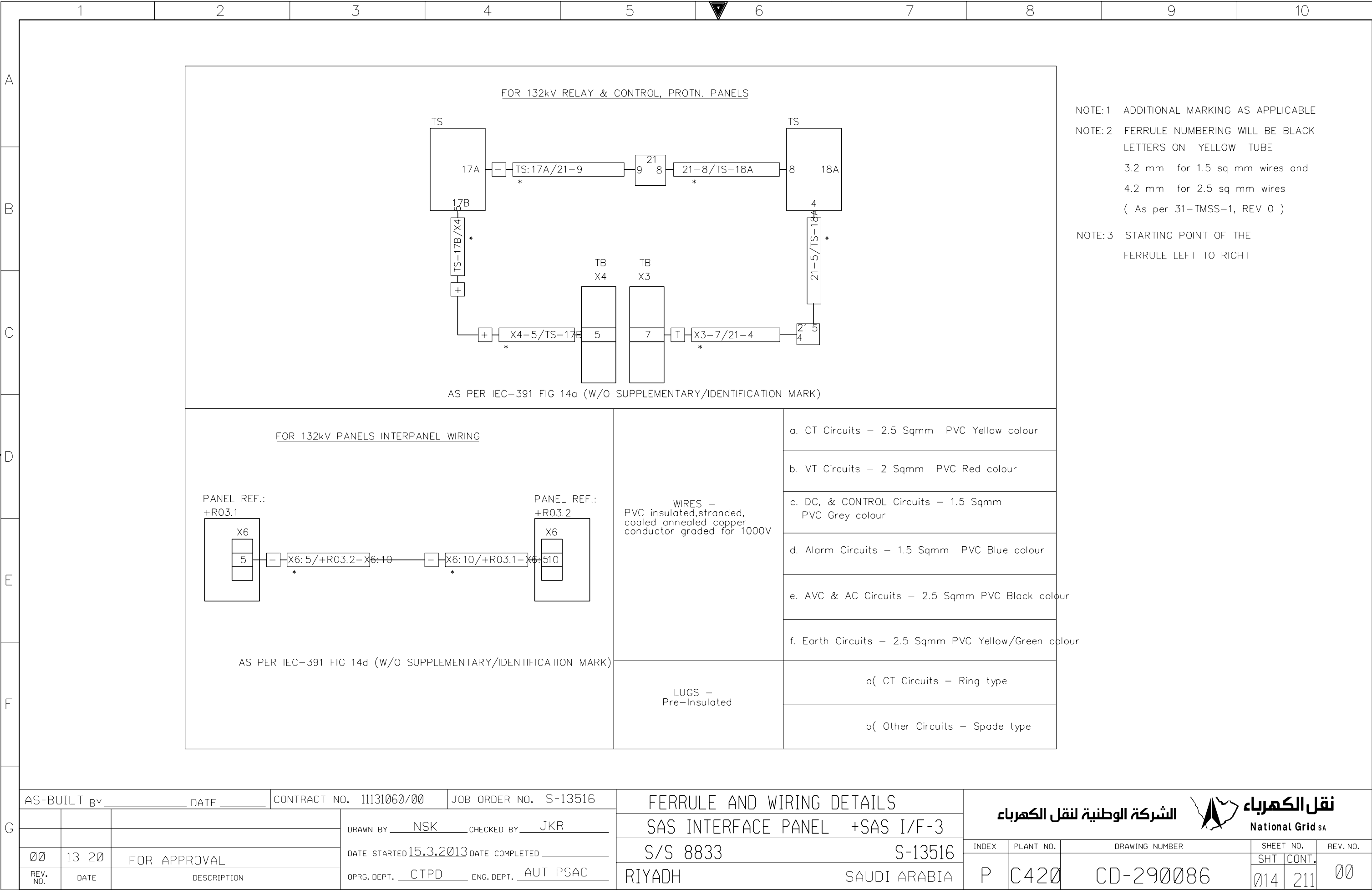
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S/S 8833 S-13516		
RIYADH SAUDI ARABIA		

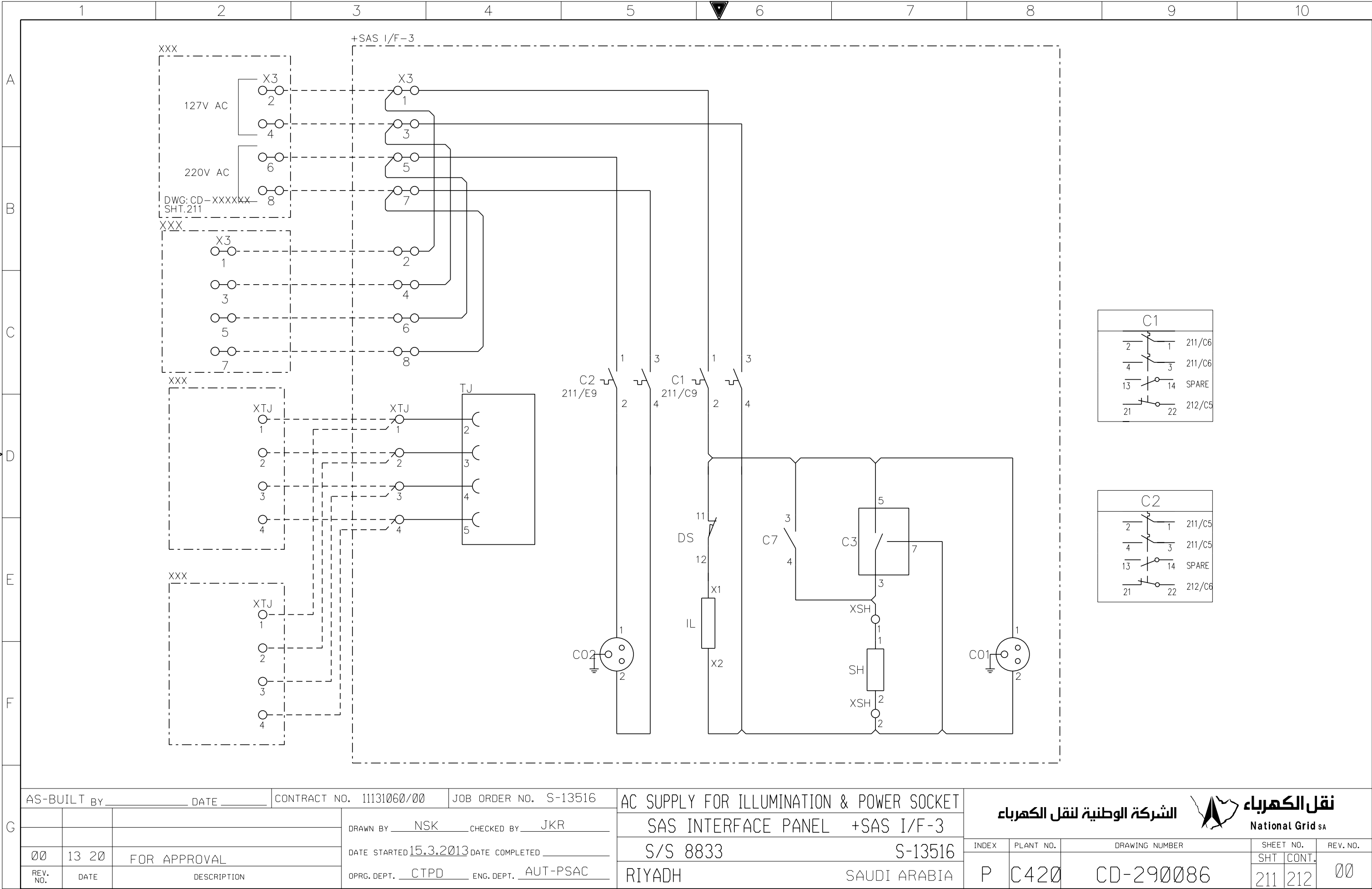
الشركة الوطنية لنقل الكهرباء National Grid sa				
INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	
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NG/D2-D (2012/01)

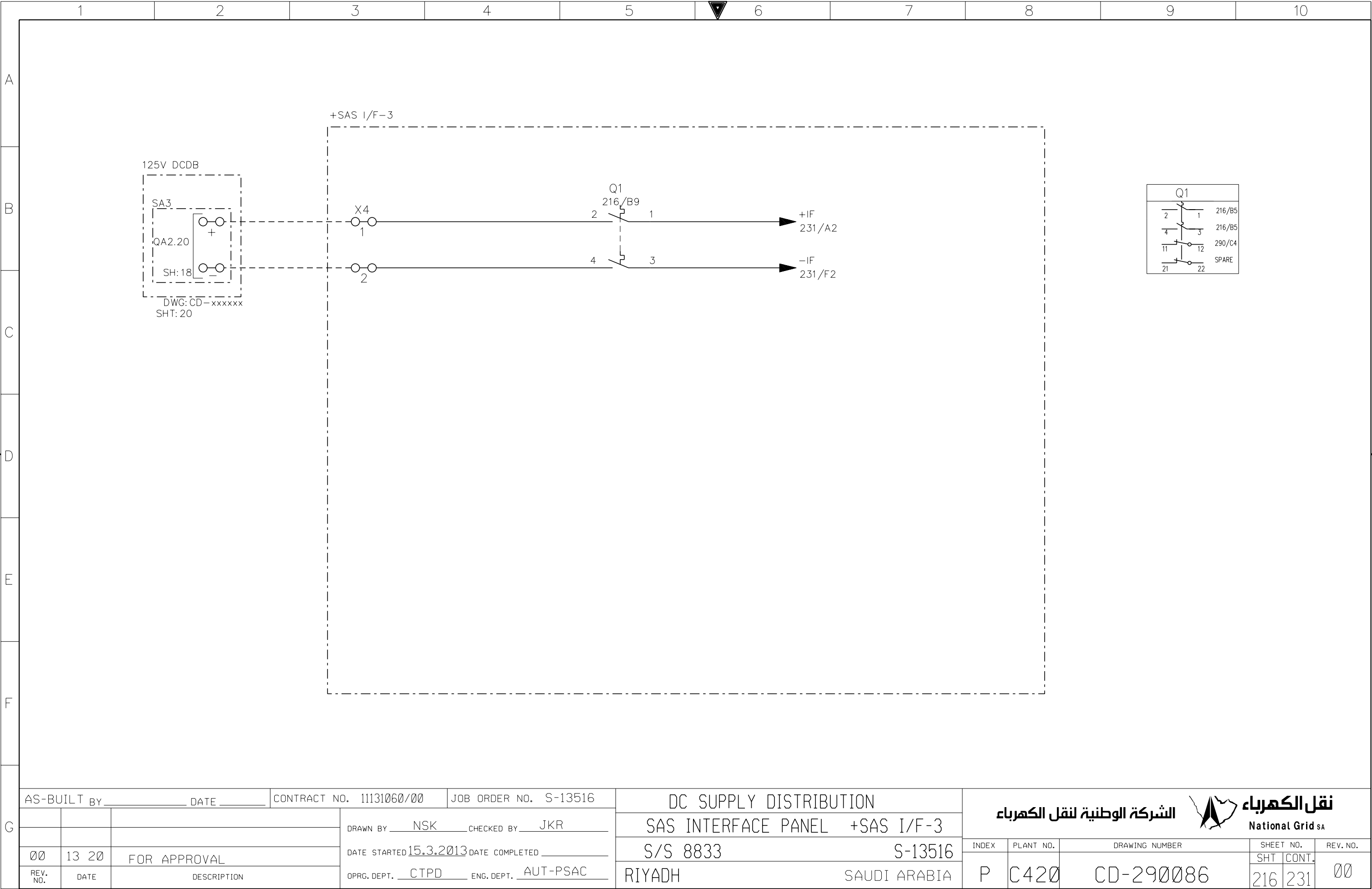
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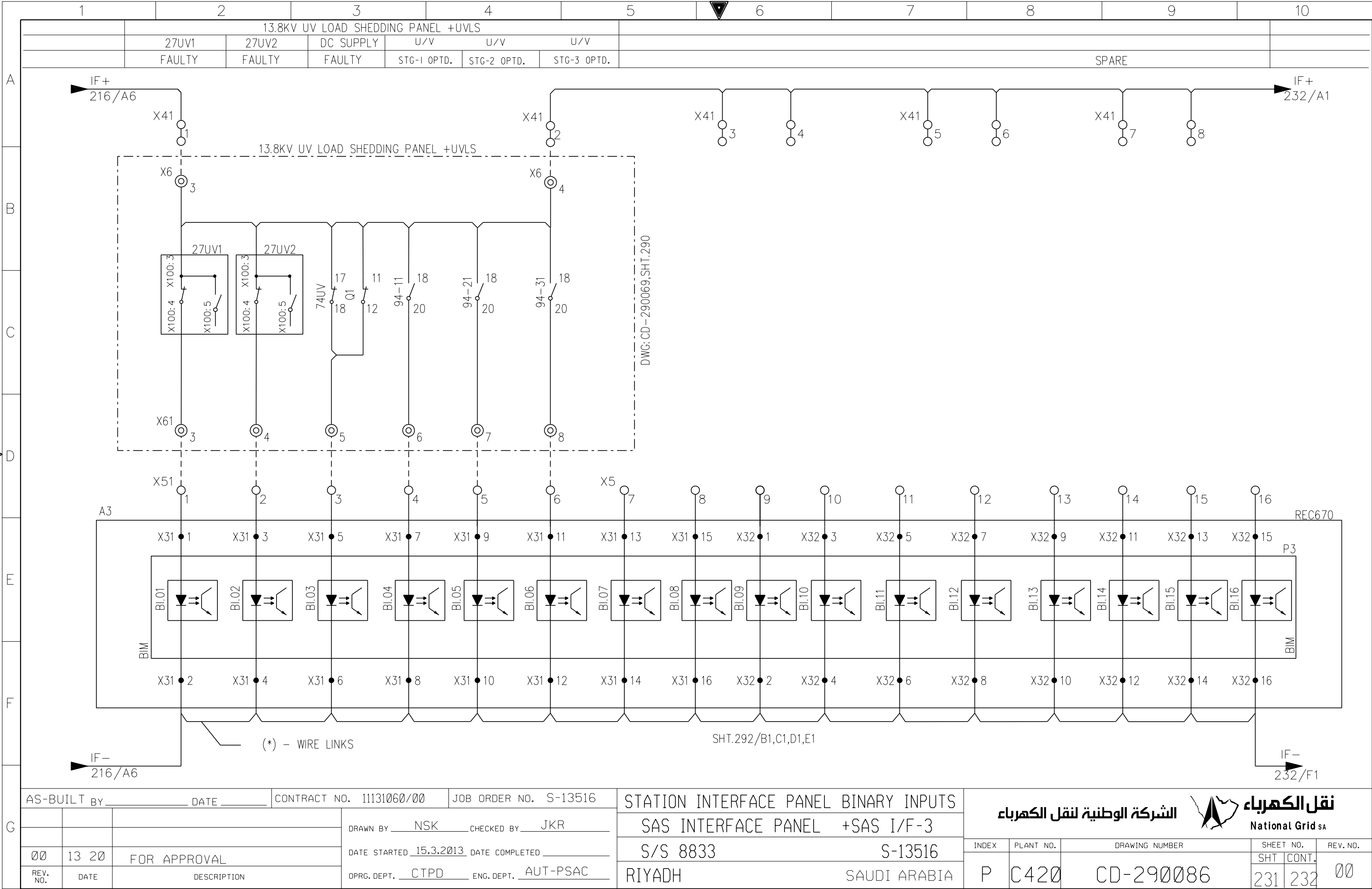
	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										
G	LEGENDS ±R1 ±R2 ±R3 ±IT FL BB RS± BB CBF± /CBF± DC SUPPLY – MAIN PROTECTION DC SUPPLY – SECONDARY PROTECTION DC SUPPLY – BACK UP PROTECTION DC SUPPLY – INTER TRIP DC SUPPLY – FLASHING CIRCUIT DC SUPPLY – BUS BAR – PROTECTION RESET DC SUPPLY – CBF PROTECTION R CR ECC LOCAL REMOTE RESET BUS – ALARM SYSTEM CONTROL ROOM ENERGY CONTROL CENTRE THE LOCATION OF CONTROLLED DEVICE ANY OTHER LOCATION NOT LOCAL ON OFF A T S CS CT LS LT LC LO RO CB NORMALLY OPEN AUXILIARY CONTACT CB NORMALLY CLOSED AUXILIARY CONTACT COMMON TEST POSITION SERVICE POSITION CLOSE IN SERVICE POSITION CLOSE IN TEST POSITION LOCAL SERVICE LOCAL TEST LOCAL CLOSE LOCAL OPEN REMOTE OPEN NOTES LABELS WHITE LABEL WITH BLACK LETTERING WILL BE PROVIDED FOR ALL MOUNTED APPARATUS EQUIPMENT IDENTIFICATION AND FUNCTION REFERENCE LABEL WILL BE PROVIDED FOR FRONT MOUNTED EQUIPMENTS OF THE PANEL AND EQUIPMENT IDENTIFICATION LABEL WILL BE PROVIDED FOR INTERNALLY MOUNTED EQUIPMENTS WIRING PVC INSULATED 600V GRADE 2.5 SQ.mm. YELLOW COLOURED FOR CT CIRCUITS 2.5 SQ.mm. RE COLOURED FOR VT CIRCUITS 1.5 SQ.mm. GREY COLOURED FOR DC SUPPLY, SCADA AND CONTROL CIRCUITS 1.5 SQ.mm. BLUE COLOURED FOR COMMON ALARM SIGNALS 2.5 SQ.mm. BLACK COLOURED FOR AVC AND AC CIRCUITS 2.5 SQ.mm. YELLOW/GREEN COLOURED FOR EARTHING CONNECTIONS FOLLOWING MARKERS SHALL BE PROVIDED ON FOLLOWING WIRES: + SIGN FOR DC + WIRE – SIGN FOR DC – WIRE LUGS A. CT CIRCUITS– RING TYPE B. OTHER CIRCUITS – SPADE TYPE FERULLING YELLO TUBE 3.2 mm FOR 1.5SQ mm WIRES AND 4.2 FOR 2.5 SQ mm WIRES (AS PER 31 – TMSS–1, RE.0)									

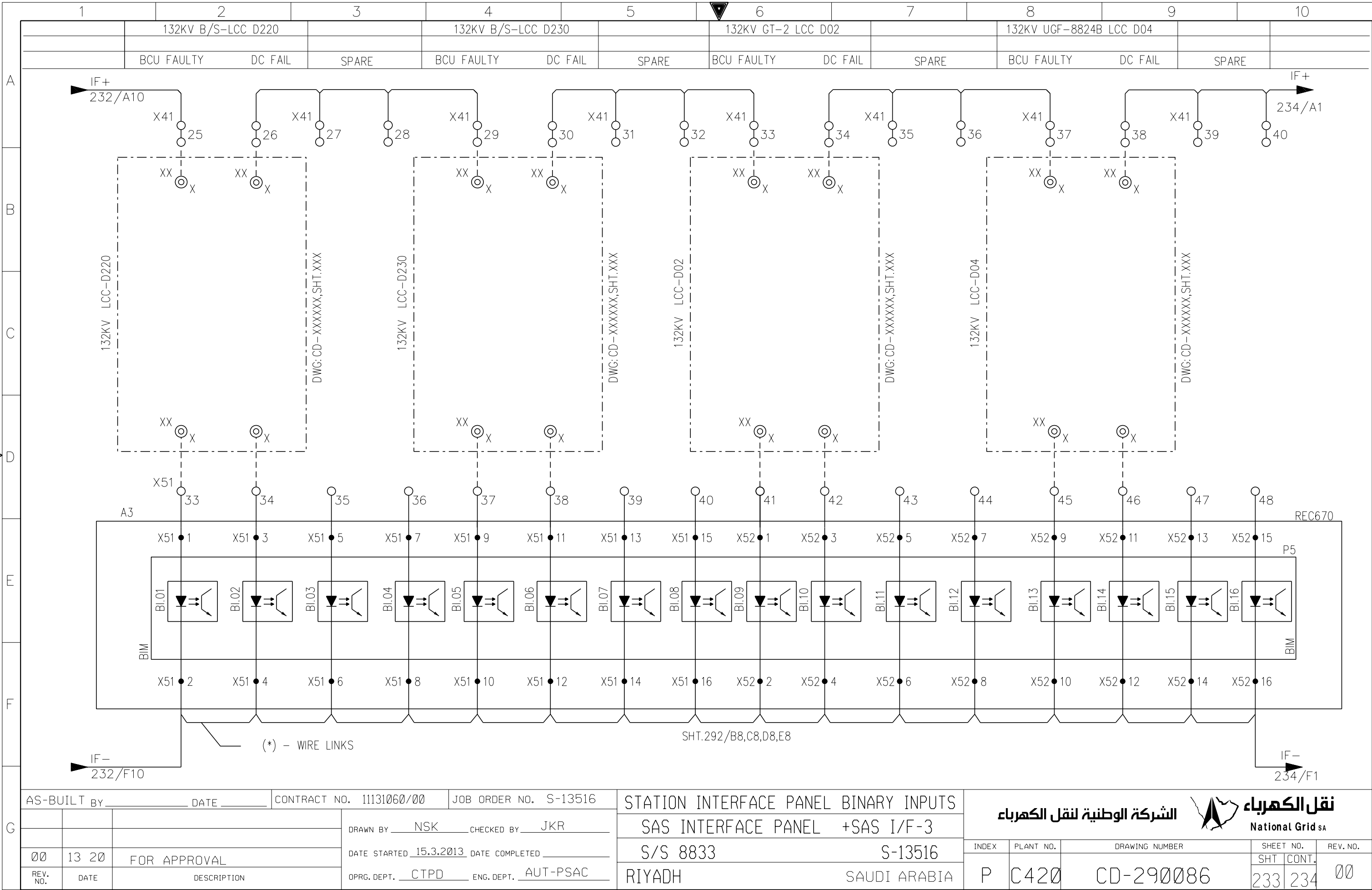




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AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131060/00 JOB ORDER NO. S-13516

DRAWN BY NSK CHECKED BY JKR

DATE STARTED 15.3.2013 DATE COMPLETED _____

OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC

STATION INTERFACE PANEL BINARY INPUTS

SAS INTERFACE PANEL +SAS I/F-3

S/S 8833

S-13516

RIYADH

SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء



نقل الكهرباء
National Grid sa

INDEX

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C420

CD-290086

233

234

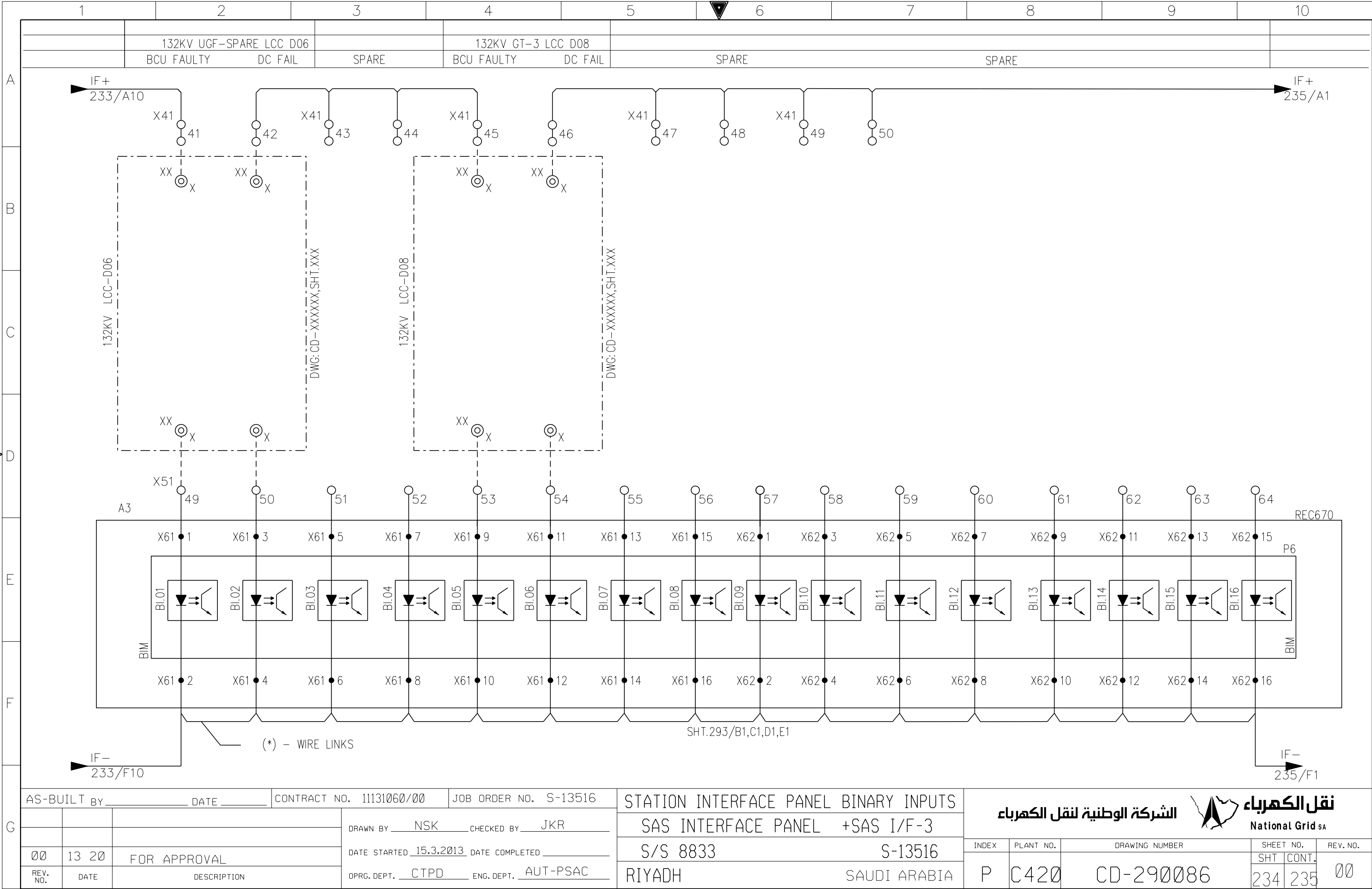
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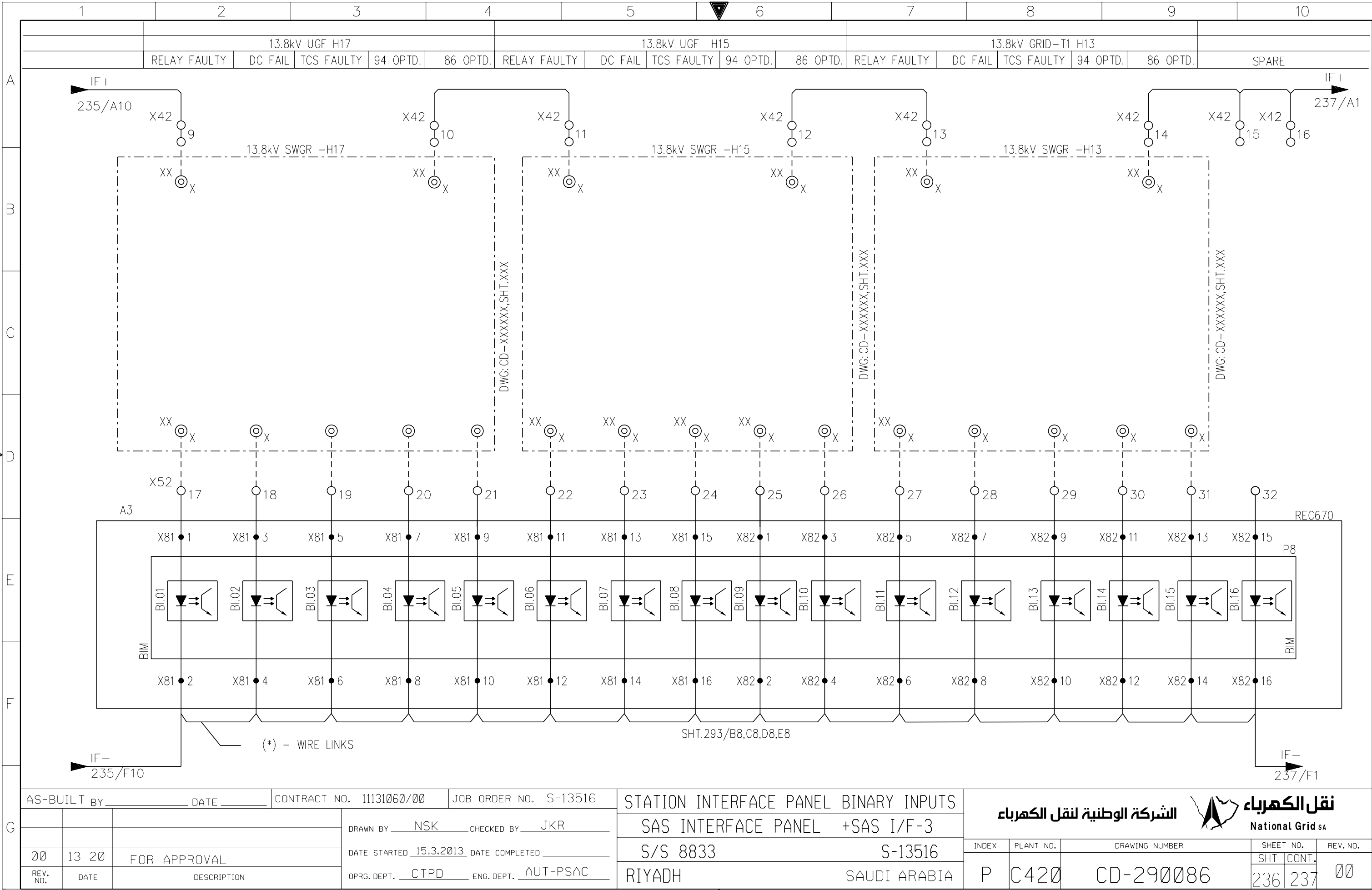
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VECTOR

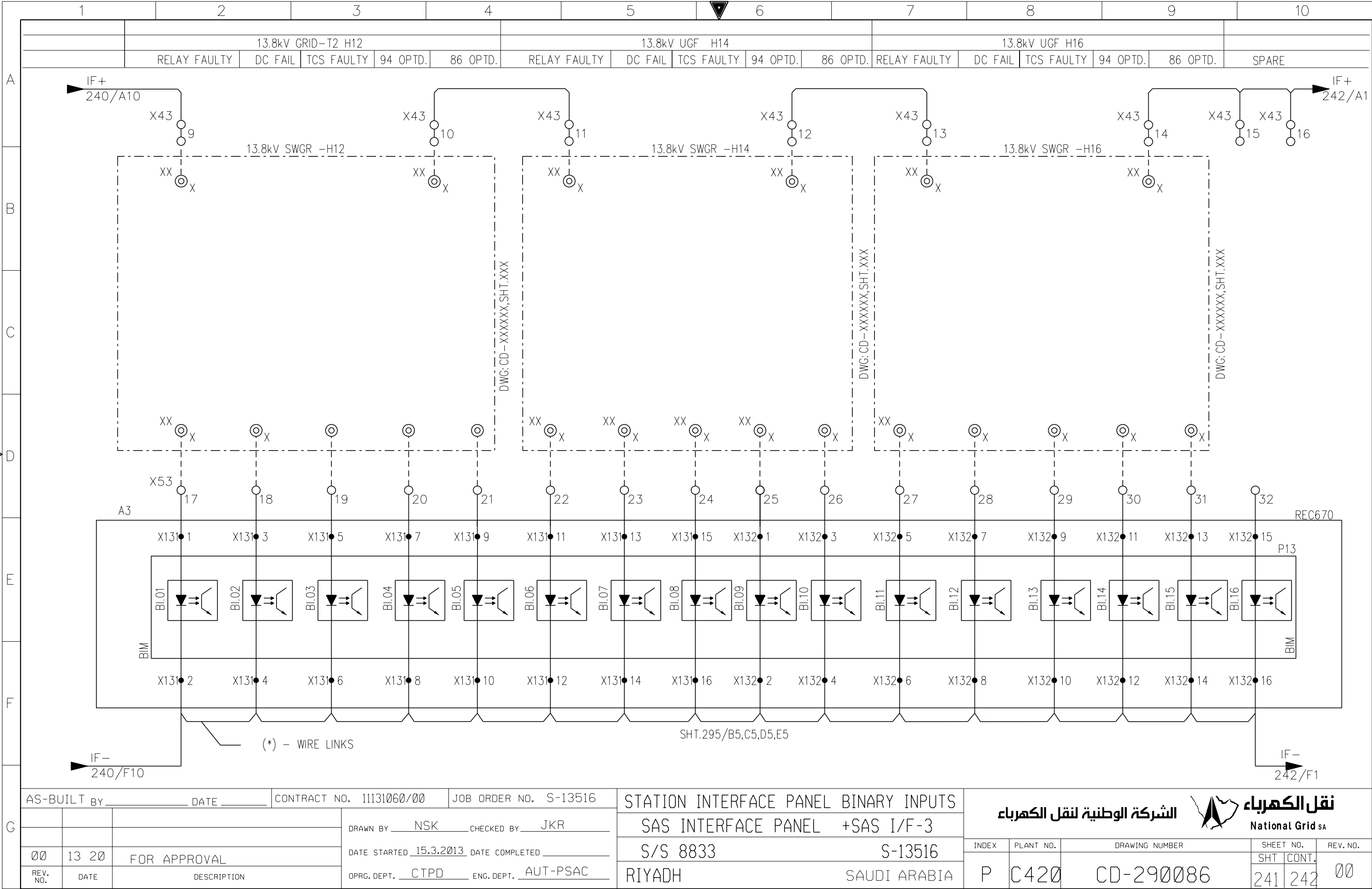
NGD200



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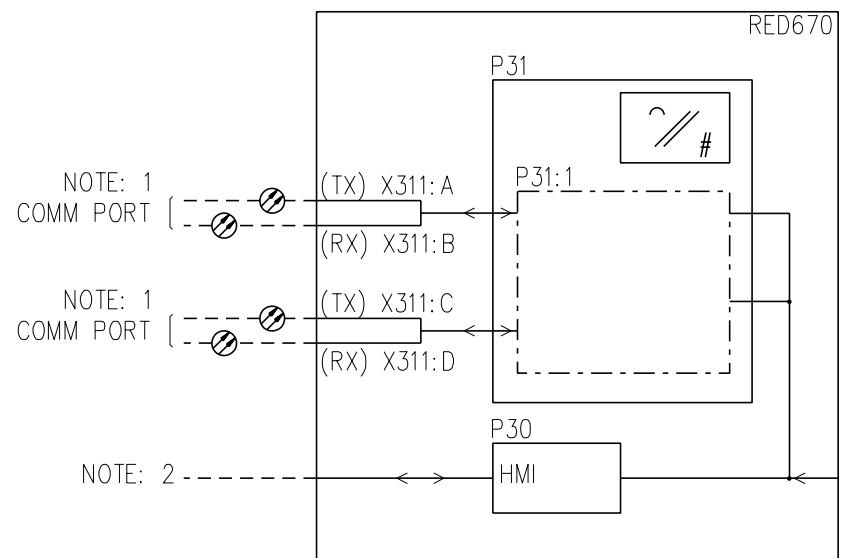


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											DRAWN BY <u>NSK</u> CHECKED BY <u>JKR</u>		SAS INTERFACE PANEL +SAS I/F-3							
											DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____		S/S 8833 S-13516		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.	
00											13 20 FOR APPROVAL		RIYADH SAUDI ARABIA		P	C420	CD-290086	SHT 290	CONT. 291	
REV. NO.		DATE		DESCRIPTION		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		00												



	1	2	3	4	5	6	7	8	9	10
A	A3									
B	BINARY INPUT CARD									
C	A3BIM P3 REC670									
D	LOCATION=P3 PLANT ADAPTED CONFIGURATION									
E	SHT.231/D1 TO D10									
F	SHT.232/D1 TO D10									
G	SHT.233/D1 TO D10									
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131060/00 JOB ORDER NO. S-13516										
BLOCK REFERENCE										
SAS INTERFACE PANEL +SAS I/F-3										
S/S 8833 S-13516										
RIYADH SAUDI ARABIA										
الشركة الوطنية لنقل الكهرباء National Grid sa										
INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.										
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A										
B										
C										
D										
E										
F										
G										

A3

BIM P3

REC670

LOCATION=P3

PLANT ADAPTED CONFIGURATION

SHT.234/D1 TO D10

+ -- X61

1

BI.01

//

2

BI.02

//

3

BI.03

//

4

BI.04

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5

BI.05

//

6

BI.06

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7

BI.07

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8

BI.08

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9

10

11

12

13

14

15

16

A3

BIM P3

REC670

LOCATION=P3

PLANT ADAPTED CONFIGURATION

SHT.235/D1 TO D10

+ -- X71

1

BI.01

//

2

BI.02

//

3

BI.03

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BI.04

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BI.05

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BI.06

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BI.07

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BI.08

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14

15

16

A3

BIM P3

REC670

LOCATION=P3

PLANT ADAPTED CONFIGURATION

SHT.236/D1 TO D10

+ -- X81

1

BI.01

//

2

BI.02

//

3

BI.03

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BI.04

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BI.05

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BI.06

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AS-BUILT BY _____ DATE _____

CONTRACT NO. 11131060/00

JOB ORDER NO. S-13516

DRAWN BY _____ NSK _____

CHECKED BY _____ JKR _____

DATE STARTED 15.3.2013

DATE COMPLETED _____

OPRG. DEPT. _____ CTPD _____

ENG. DEPT. _____ AUT-PSAC _____

BLOCK REFERENCE

SAS INTERFACE PANEL +SAS I/F-3

S/S 8833

S-13516

RIYADH

SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء



National Grid sa

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CONT.

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REV. NO.

DATE

DESCRIPTION

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13 20

FOR APPROVAL

NG/D2-D (2012/01)

DMS

VECTOR

NGD200

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	1	2	3	4	5	6	7	8	9	10
A	A3									
B	BINARY INPUT CARD									
C	A3BIM P3 REC670									
D	LOCATION=P3 PLANT ADAPTED CONFIGURATION									
E	A3BIM P3 REC670									
F	LOCATION=P3 PLANT ADAPTED CONFIGURATION									
G	A3BIM P3 REC670									
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SAS INTERFACE PANEL +SAS I/F-3										
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الشركة الوطنية لنقل الكهرباء National Grid sa										
INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.										
P C420 CD-290086 294 295 00										

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A	A3									
B	BINARY INPUT CARD									
C	A3BIM P3 REC670									
D	LOCATION=P3 PLANT ADAPTED CONFIGURATION									
E	SHT.240/D1 TO D10									
F	SHT.241/D1 TO D10									
G	SHT.242/D1 TO D10									
AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131060/00 JOB ORDER NO. S-13516										
BLOCK REFERENCE										
SAS INTERFACE PANEL +SAS I/F-3										
S/S 8833 S-13516										
RIYADH SAUDI ARABIA										
الشركة الوطنية لنقل الكهرباء National Grid sa										
INDEX PLANT NO. DRAWING NUMBER SHEET NO. REV. NO.										
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